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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,969	09/09/2003	Dave G. Erickson	38190/263311	4140

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EXAMINER

AFTERGUT, JEFF H

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 03/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/657,969	Applicant(s) ERICKSON ET AL.	
	Examiner Jeff H. Aftergut	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-4, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Brussee for the same reasons as expressed in paragraph 2 of the Office action dated 12-20-05, paragraph 2.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brussee in view of either one of Voirol or Thongs, Jr. for the same reasons as expressed in the Office action dated 12-20-05, paragraph 4.
5. Claims 1-6, 9-12 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbett et al in view of Foster et al for the same reasons as expressed in the Office action dated 12-20-05, paragraph 5.
6. Claims 7, 8, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 5 further taken with any one of Brussee, Voirol or Thongs, Jr. for the same reasons as expressed in paragraph 6 of the Office action dated 12-20-05.

Response to Arguments

7. Applicant's arguments filed 2-22-06 have been fully considered but they are not persuasive.

The applicant initially is advised that the reference to Brussee was applied to reject the claims under 35 USC 102 rather than 35 USC 103 as initially noted in the reply. The applicant argues that Brussee does not teach an inner portion of a layup surface that generally corresponds to a desired contour as claimed as the applicant describes the layup surface as having an inner portion 134 which is surrounded by the grip feature 140 and an outer portion 136. This is not well taken. The claims as presented do NOT define a layup surface which includes both an inner portion, an outer portion and a grip feature. Rather claim 1 defines a mandrel having a lay up surface for receiving a composite structure thereon defining an inner portion generally corresponding to the contour of the composite structure and a grip feature disposed on the layup surface and extending at least partially around the inner portion. There is no mention of an outer portion of the lay up surface. Brussee suggested a lay up surface which included end fittings 36, 37 as well as bladder 18. These components made up the layup surface for receiving the composite structure. The reference taught that the bladder 18 defined the contour of the vessel. Each of the end fittings 36, 37 included a groove over which the composite material was laid and into which one disposed a binding thread in order to retain the longitudinally extending fibers within the groove and on the bladder lay up surface. The reference to Brussee thus taught the use of a grip feature. Additionally, the grip features (the end fittings 36, 37) were disposed about the bladder at the ends of the windings and thus the grip features clearly extended at least partially around the inner portion (they completely surrounded the inner portion at the ends of the inner portion). One could view the inner portion to be the entire assembly of

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the bladder and the end fittings. In this instance the retaining portions are at least partially around the inner portion as they are at least at the ends of the body which make up a portion of the surround of the inner portion of the mandrel.

The applicant argues that even if one were to construe the bladder to be a mandrel (and it certainly is a mandrel within the context of Brussee as well as within the context of the claimed invention), the grip features do not extend at least partially around the surface of the bladder as they are not disposed radially about the bladder. However as discussed above, the retaining portion does in fact extend around at least a portion of the periphery of the inner portion. Additionally regarding claim 2 note that the reference suggested that the retaining portion were continuous surfaces which extended completely about the end regions of the mandrel. As such, the reference is deemed to satisfy the claim. There is no need for the grip feature to extend radially about the mandrel or bladder in Brussee to satisfy the claim as the claim does not require a completely enclosed inner surface surrounded by an outer surface but only requires that the retaining means extend partially about the periphery of the inner portion.

With regard to claim 2, see the comments above. Note that the retaining surface was in fact a continuous surface which was disposed about the ends of the bladder to enclose the same about the perimeter therein in a continuous manner. Regarding claim 3, the reference clearly included retaining grooves therein which acted in the same manner as the claimed retaining means and included an edge which met with the bladder therein. Regarding claim 7, the applicant argues that Brussee does not define a

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boundary between an inner lay up surface and an outer lay up surface. The applicant is advised that the reference clearly defined a groove for the retaining surface and that the groove was disposed about the periphery of where the material was being applied (the inner lay up surface) and the regions where no composite material was to be applied outside of the lay up region (the outer surface). The reference is deemed to satisfy the claimed invention.

Regarding the references to either one of Voirol or Thongs, Jr., the applicant did not address these references or their application against claims 1-8 in the rejection based upon 35 USC 103. It is therefore assumed that applicant agrees with the Office interpretation of these references and their relevant teachings in combination with Brussee.

Regarding claim 9, the applicant addresses the combination of Corbett and Foster and states that the combination failed to teach a grip feature as claimed and that the perforated plate or strip 140 did not define a grip feature. This is not well taken. The applicant is advised that the reference clearly suggested a gripping feature disposed about an area wherein one molded the material against the form as disclosed in Figure 1b. additionally, while the strip with the openings was attached to the mold surface, the claims do not exclude such from becoming part of the lay up surface and/or mandrel. In fact, there is nothing in the claims which requires that the lay up surface be an integral single piece of tooling. The applicant is advised that while such strips are described as being difficult to clean, one skilled in the art would have nonetheless understood that it would have been obvious to provide the specified retaining means about the periphery

of the inner lay up surface in order to retain the material in its proper local during the molding operation.

The applicant is advised that one cannot obtain a patent for that which is already in the public domain. The applicant is advised that here the use of the retaining feature was known and in the public domain at the time the invention was made as evidenced by Foster et al. the fact that there was some disadvantage to utilizing the known gripping and retaining mechanisms in the prior art would not have deterred one skilled in the art from utilizing the same with the known benefits of having the retaining means there. It merely means that those skilled in the art might have sought different solutions but that the specified solution including the retaining means was known at the time the invention was made.

The applicant argues that the plurality of holes in total do not equate to a gripping feature which was disposed about the periphery. While it is true that each individual hole did not provide a groove which extended completely about the assembly, one taking a fair reading from what is taught by the reference would have understood that the gripping strips would have been disposed completely about the assembly and that in combination, the plurality of holes would have provided a retaining surface which was disposed completely about the surface being molded. Applicant's narrow view of what the reference teaches would not have been ascertained when one viewed the prior art as a whole.

Regarding the tie down plies, please note that the reference to Corbett et al suggested that the tie down strips were known in the art and that the same extended

beyond the edge of the moldings. Certainly, it would have been within the purview of the ordinary artisan to employ the processing of Foster in the process of Corbett in order to retain the material in its proper local during the molding operation and such would have resulted in the placement of the tie downs in the retaining means described therein. The applicant argues that the tie downs are required to have an adhesive film secured thereto which have a lower cure point than the resin of the laminate. The reference to Corbett suggested that one skilled in the art would have employed adhesive films 180 between the tie down plies 150, 175 and that this adhesive film 180 served to secure the tie down films together and additionally was provided as a low curing adhesive film (column 6, lines 28-37). The curing cycle typically heats the plies to 235 degrees C while the low curing temperature resin cured at 121 degrees C. The reference taught that the tie down plies as well as resin films to retain the same were disposed outward of the trim line 165 and were utilized to retain the tie down plies in their proper position. There is simply no reason to believe that these plies and film assemblies would not have been additionally retained with the retaining means of Foster as Foster provided the retaining means outside of the trim line about the assembly in order to retain the plies in their proper position during curing to prevent crushed core at the edge (which is exactly what the tie downs also provide for). In order to ensure that there is no crushed core, it would have been obvious to provide additional retaining means about the exterior of the assembly such as the retaining means of Foster in the operation of Corbett et al. The reference to Corbett did provide for adhesive films between the tie downs which adhesive films had a low temperature cure therein in order to retain the tie

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downs in position. To provide additional retaining means such as the means of Foster would have more completely ensured that the assembly was retained in place and the edges of the core would have remained uncrushed.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jeff H. Aftergut
Primary Examiner
Art Unit 1733

JHA
March 28, 2006